

# HUB FOR EU DEFENCE INNOVATION (HEDI) FACTSHEET

## 1. Introduction: The establishment of HEDI

As a core element of the European Union's (EU) Strategic Compass for Security and Defence, the Hub for EU Defence Innovation, known as HEDI, has been established within the European Defence Agency (EDA) to foster innovative solutions for military capabilities. This will be empowered by a strengthened cooperation among Member States on advancing defence innovation.

EDA Defence Ministers approved the establishment of HEDI on 17 May 2022 and the Hub was officially launched at the first EDA Defence Innovation Day on 31 May 2022 under the auspices of the French Presidency of the Council of the EU.

In the establishment document of HEDI, three steps were defined to fulfil HEDI's potential:

- The **first** step was to inspire and promote defence innovation at the European level: the hub focused on networking and situational awareness activities.
- The **second** step was to develop the hub to be operational across all activities and services identified in the initial portfolio.
- The **third** step, HEDI 2.0, was proposed to reach the full potential of the hub as an EU-wide platform for cooperative design and experimentation, embedded in the EU capability development process.

This document outlines the evolution of the hub's portfolio (HEDI 2.0) based on learnings accrued during the first two years of operation.

## 2. Evolution of the portfolio – underpinning rationale

The initial portfolio of the hub was designed to target different stakeholders from Member States' innovation ecosystems, such as MS administrations, operational units, academia, and industries of all sizes are involved in the HEDI services. This portfolio evolution provides, by design, a more structured and efficient framework, strengthening the hub's capacity to support innovations along the maturation pipeline.

The core objectives of the HEDI 2.0 portfolio can be summarized as follows:

- **Identify** rapidly advancing technologies, including dual-use and civilian innovations, and **assess** their potential for military applications;
- **Support the maturation of the most promising technological solutions**
- **Enable the experimentation** of these solutions in close collaboration with end-users;
- **Stimulate deeper connections** between MS representatives, industry, academia and **increase awareness** about the European defence innovation ecosystem, disseminate project results and connect stakeholders.

The HEDI 2.0 portfolio is designed to enable a smoother and more efficient transition from R&T to Capability Development by consolidating services around key areas of defence innovation. This approach increases the efficiency of each service and will strengthen a full-spectrum approach across the defence innovation processes.

### 3. Widening the Scope: Identification of Emerging Innovations

A core objective of HEDI 2.0 is to cast a wider net in identifying and supporting innovations. Through enhanced scouting efforts, HEDI seeks to recognize emerging innovations not only within traditional defence sectors but across industries and regions where breakthroughs may offer strategic defence innovation advantages.

The **Defence Frontier Insights (DFI)** service will become a critical component to this expanded vision. By scanning and analysing advancements across both defence and non-defence industries, DFI serves as an early identification system for technologies and their potential application that could impact the EU security and defence landscape. This service not only identifies new players and technologies but also tracks weak signals that may indicate longer-term trends in the technological environment and assess the potential impact on military applications.

Through DFI, HEDI aims at providing actionable intelligence that informs various aspects of the innovation process. By drawing on EDA's prioritisation tools (i.e. CDP, OSRA, KSA), this service will also strengthen the connections between early-stage research, innovation and capability development. The **Defence Frontier Insights** service is designed to play a pivotal role in feeding a coherent and structured innovation pipeline:

- **Research & Technology (R&T):** By keeping a pulse on the latest research developments (i.e. weak signals analysis, patent landscaping), HEDI

provides a systemic EU outlook that complements and augments efforts at the national level, ensuring that MS remain informed and up to date on emerging technologies with potential defence applications

- **Innovation:** Defence Frontier Insights works to map out innovation ecosystems, maturity, dual-use areas, identifying key players, technological readiness levels, and potential barriers to adoption. This analysis enables HEDI to identify the most suitable areas for targeted support through own service while also providing key insights to MS, CAPTECHs and other EDA working bodies.
- **Capability Development:** The most critical role of Defence Frontier Insights is in translating technological innovations into actionable potential defence capabilities. By integrating findings from R&T and innovation pipelines, the service provides insights on the operational utility of new technologies.

#### 4. Accelerating the Maturation of Innovation

HEDI 2.0 addresses the dynamic and fast-changing defence landscape by prioritizing the rapid development of innovations. Traditional development cycles often struggle to match the urgency and fluidity of modern defence needs, and HEDI 2.0 aims to bridge this gap.

The **HEDI Innovators Forge** provides a specialized service to support promising innovations through a structured progression. Unlike programs aimed at business development, the Forge focuses solely on advancing solutions to tackle specific military challenges and demonstrating their practical applications.

The **HEDI Innovators Forge** advances solutions through staged development, funding innovators from start-ups to large entities to tackle specific defence challenges.

- **Challenge Identification:** HEDI defines military problems using EDA tools like CDP and PIRs, inviting innovators to propose functional, feasible, and impactful solutions.
- **Phased Development:** Selected solutions receive funding and guidance to refine and test their technology, advancing through stages that build technical and operational maturity.
- **Evaluation:** At each phase's end, solutions are assessed for performance and feasibility. Only the most promising advance, ensuring resources are focused on impactful innovations.

## 5. Expanding the Experimentation Toolkit: Pathways to Rapid Adoption

HEDI 2.0 refines its experimentation processes to accelerate the transition of innovations from concept to operational deployment. The enhanced toolkit validates technologies, accelerates development, and provides actionable insights to integrate solutions into military operations swiftly.

The **Experimentation Highways** framework bridges research and capability development, using tailored testing stages to assess technological readiness. For innovation to have a meaningful impact, it must be adopted swiftly and efficiently by MS. The experimentation process in HEDI 2.0 is designed to facilitate this by:

- **Validating Technologies in Real-World Scenarios:** OPEX campaigns test technologies under realistic military conditions, assessing technical performance and operational utility. Results provide critical data on performance benchmarks, integration potential, and deployment readiness to support rapid adoption.
- **Providing Actionable Insights:** Experimentation generates detailed feedback to refine and adapt technologies, ensuring they align with military requirements and reduce development risks.
- **Accelerating Maturation:** Short feedback loops bring innovators and end-users together to refine technologies, align application scenarios, and fast-track capability roadmaps.
- **Creating Adoption Blueprints:** Each campaign produces a readiness blueprint that guides scaling and integration into Member State defence frameworks, aligning innovations with operational needs and state-of-the-art benchmarks.

## 6. Strengthening Connections: A Collaborative Approach

HEDI 2.0 also maintains its commitment to foster situational awareness across Member States through the **European Defence Innovation Network (EDIN)**, and continuing engagement with the European Commission, NATO and other international partners.

Through events like the **European Defence Innovation Days (EDID)** and strategic engagements with industry, HEDI 2.0 will continue to foster a culture of innovation that extends beyond traditional defence circles, creating a dynamic environment where new ideas and technologies can thrive.

## 7. Conclusion: A Future-Focused Innovation Hub

HEDI 2.0 represents a significant enhancement of the EDA's capabilities to accelerate EU defence innovation. With expanded services, faster innovation pathways, and stronger collaborative frameworks, HEDI is uniquely positioned to bolster EU defence capabilities and keep Member States at the cutting edge of defence technologies.

The deployment of HEDI 2.0 will follow a phased approach, similar to its initial portfolio, with a gradual increase in budget allocation to support implementation. This approach ensures the services are tested effectively while progressively building the necessary resources.

This evolution underscores EDA's unwavering commitment to fostering a robust innovation ecosystem. By addressing current needs and anticipating future challenges, HEDI 2.0 is set to reinforce the EU's leadership in defence innovation.